

Amendments to the Claims

1. (Currently Amended) A method for routing communication lines between blocks of an application specific integrated circuit (ASIC), comprising:

determining route paths between blocks of the ASIC;

scanning the route paths for transmission line replacement candidates; and

for each transmission line replacement candidate, automatically selecting a buffered wire or a transmission line to implement the a route path, based on process specific parameters of the transmission line.

2. (Original) The method of claim 1, wherein determining route paths further comprises:

obtaining multiple route paths using wires with and without buffers.

3. (Currently Amended) The method of claim 1, wherein a transmission line replacement candidate is selected from the group consisting of a route path the that passes over a block of the ASIC and a route path that does not require a buffer.

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4. (Currently Amended) The method of claim 1, wherein automatically selecting a buffered wire or a transmission line to implement ~~the~~ a route path further comprises:

providing a look-up table containing the process specific parameters of the transmission line.

5. (Currently Amended) The method of claim 4, wherein automatically selecting a buffered wire or a transmission line to implement ~~the~~ a route path further comprises:

determining a length of the route path for the buffered wire;

determining a length of the route path for the transmission line, and obtaining, based on the process specific parameters of the transmission line contained in the look-up table, a value for the transmission line;

comparing the value for the transmission line to a corresponding value for the buffered wire; and

automatically selecting the buffered wire or the transmission line based on the comparison.

6. (Original) The method of claim 5, wherein the value is signal delay per unit length.

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7. (Original) The method of claim 1, wherein the transmission line comprises a coplanar waveguide transmission line.

8. (Currently Amended) A program product stored on a recordable medium for routing communication lines between blocks of an application specific integrated circuit (ASIC) which, when executed, comprises:

    program code for determining route paths between blocks of the ASIC;

    program code for scanning the route paths for transmission line replacement candidates; and

    program code for automatically selecting a buffered wire or a transmission line to implement the a route path, for each transmission line replacement candidate, based on process specific parameters of the transmission line.

9. (Original) The program product of claim 8, wherein the program code for determining route paths further comprises:

    program code for obtaining multiple route paths using wires with and without buffers.

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10. (Currently Amended) The program product of claim 8, wherein a transmission line replacement candidate is selected from the group consisting of a route path ~~the~~ that passes over a block of the ASIC and a route path that does not require a buffer.

11. (Currently Amended) The program product of claim 8, wherein the program code for automatically selecting a buffered wire or a transmission line to implement ~~the~~ a route path further comprises:

program code for accessing a look-up table containing the process specific parameters of the transmission line.

12. (Currently Amended) The program product of claim 11, wherein the program code for automatically selecting a buffered wire or a transmission line to implement ~~the~~ a route path further comprises:

program code for determining a length of the route path for the buffered wire;

program code for determining a length of the route path for the transmission line, and obtaining, based on the process specific parameters of the transmission line contained in the look-up table, a value for the transmission line;

program code for comparing the value for the transmission

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line to a corresponding value for the buffered wire; and  
program code for automatically selecting the buffered wire  
or the transmission line based on the comparison.

13. (Original) The program product of claim 12, wherein the value  
is signal delay per unit length.

14. (Currently Amended) A design tool for routing communication  
lines between blocks of an application specific integrated  
circuit (ASIC), comprising:

a system for determining route paths between blocks of the  
ASIC;

a system for scanning the route paths for transmission line  
replacement candidates; and

a system for automatically selecting a buffered wire or a  
transmission line to implement the a route path, for each  
transmission line replacement candidate, based on process  
specific parameters of the transmission line.

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15. (Original) The design tool of claim 14, wherein the system for determining route paths further comprises:

a system for obtaining multiple route paths using wires with and without buffers.

16. (Currently Amended) The design tool of claim 14, wherein a transmission line replacement candidate is selected from the group consisting of a route path ~~the~~ that passes over a block of the ASIC and a route path that does not require a buffer.

17. (Currently Amended) The design tool of claim 14, wherein the system for automatically selecting a buffered wire or a transmission line to implement ~~the~~ a route path further comprises:

a look-up table containing the process specific parameters of the transmission line.

18. (Currently Amended) The design tool of claim 17, wherein the system for automatically selecting a buffered wire or a transmission line to implement ~~the~~ a route path further comprises:

a system for determining a length of the route path for the buffered wire;

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a system for determining a length of the route path for the transmission line, and obtaining, based on the process specific parameters of the transmission line contained in the look-up table, a value for the transmission line;

a system for comparing the value for the transmission line to a corresponding value for the buffered wire; and

a system for automatically selecting the buffered wire or the transmission line based on the comparison.

19. (Original) The design tool of claim 18, wherein the value is signal delay per unit length.

20. (Previously Presented) The design tool of claim 14, wherein the transmission line comprises a coplanar waveguide transmission line.

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